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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,843	09/27/2000	Naoaki Komiya	YKI-0049	6716

7590 10/27/2004
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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT PAPER NUMBER

2674

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,843

Applicant(s)

KOMIYA ET AL.

Examiner

Kimnhung Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This application has been examined. The claims 1-15 are pending. The examination results are as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 6-7 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Shibata et al. (US patent 6,147,451)

Regarding claims 1-2, 7 and 11-12, Shibata et al. discloses in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form; gate signal line (4) which is connected to and shared by a plurality of display pixels provided on each row; gate drive circuit (31) for sequentially supplying select signal to the gate signal line (4); a voltage source line is provided for each column; and voltage from a voltage source is provided from one end of said voltage source line, wherein each of the display pixels includes an electroluminescence element (20); a first thin film transistor (Tr1) in which a display signal is applied to the drain and which is switched on and off in response to the select signal, and a second thin film transistor (Tr2) for driving the electroluminescence element (20) based on the display signal; and the gate drive circuits (31) are

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placed so that said select signals are supplied from both ends of gate signal lines to said gate signal lines, each of said gate signal lines is connected to the gate drive circuits (31) at both ends of said gate signal lines to the gate signal line (see figures 2-4, column 4, lines 14-32), and the gate drive circuits (31) include a first and second gate drive circuits arranged in a symmetric pattern to the right and left of the display portion.

Regarding claim 6, Shibata et al. disclose in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form; gate signal line (4) which is connected to and shared by a plurality of display pixels provided on each row; gate drive circuit (31) for sequentially supplying select signals to the gate signal line (4); a data line (5) is provided for each column (see an X-driver 32 for feeding a data line signal to the data lines 5); and a data signal is provided from one end of said data line (5, see figure 3); wherein each of the display pixels includes an electroluminescence element (20); a first thin film transistor (Tr1) in which a display signal is applied to the drain and which is switched on and off in response to the select signal, and a second thin film transistor (Tr2) for driving the electroluminescence element (20) based on the display signal; and the gate drive circuits (31) are placed so that said select signals are supplied from both ends of gate signal lines to said gate signal lines, each of said gate signal lines is connected to the gate drive circuits (31) at both ends of said gate signal lines to the gate signal line (see figures 2-4, column 4, lines 14-32).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Shibata et al. (US patent 6,147,451) in view of Channing et al. (US patent 4,837,566).

Shibata et al. disclose in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form as disclosed in claims 1-2. However, Shibata et al. do not disclose wherein each of said first and second gate drive circuits includes a plurality of shift registers for sequentially shifting a reference clock with a pulse width of one horizontal period. Channing et al. disclose in figure 8 a drive circuit for operating an electroluminescent display comprising a plurality of shift registers (69, 71) at left and right row drivers (see figure 8, column 9, lines 3-5) and a VSYNC pulse width of one horizontal period (see figures 8, 11, column 9, lines 3-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of shift registers (69, 71) at left and right row drivers and a VSYNC pulse width of one horizontal period as taught by Channing et al. into the first and second gate drive circuits of display system of Shibata et al. because this would reverse polarity of the blanking signals, and the left and right row drivers are alternately activated to sequentially scan the rows of the matrix (see column 9, lines 21-27).

5. Claims 4-5, 9-10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (US patent 6,147,451) and Channing et al. (US patent 4,837,566) as applied to claim 1 above, and further in view of Mihara (US patent 6,421,034).

Shibata et al. disclose in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form as disclosed in claims 1-2. Channing et al. disclose in figure 8 a drive circuit for operating an electroluminescent display comprising a plurality of shift registers (69, 71) at left and right row drivers. However, Shibata et al. do not disclose wherein each of said first and second gate drive circuits includes buffer amplifiers for driving said gate signal lines based on the output of registers and corresponds to the number of rows of said plurality of display pixels. Mihara discloses in figure 1 an EL driver circuit having a plurality of amplifiers (OP1, OP2, OP3, OP4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of amplifiers as taught by Mihara into the first and the second gate drive circuits corresponds to the number of rows of the plurality of display pixels of Shibata et al. and Channing et al.'s system because this would for amplifying voltage, current or power in the system display.

Response To Arguments

6. Applicant's argument filed on 4/6/04 has been fully considered but they are not persuasive.

Applicant argues that in figure 2, Shibata shows "both ends of a voltage source lines 6 are connected to an X-driver", and Shibata does not show "a voltage source line is provided for each column; and voltage from a voltage source is provided from one end of said voltage source line". However, examiner respectfully disagrees with the argument because figure 2, Shibata shows both ends of voltage source lines 6 (see common electrode lines 6) are connected from end of the

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voltage source and then also connected to an X-driver 32, while the claim requires “one end of voltage source line”, thus Shibata still shows “a voltage source line is provided for each column; and voltage from a voltage source is provided from one end of said voltage source line”.

Furthermore, Applicant argues that Shibata does not teach or suggest, “a data line is provided for each column; and a data signal is provided from on end of said data line”. Examiner respectfully disagrees with the argument because figures 2-3, Shibata shows “a data line (5) is provided for each column; and a data signal is provided from on end of said data line”. For these reasons, the rejections are maintained.

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Correspondence

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
October 26, 2004


REGINA LIANG
PRIMARY EXAMINER